Chapter 4: Health Care Consumption

This "Chapter 4" is original to Massachusetts Health Care Trends: 1990-1999.

While much attention in this publication is paid to the institutions of health care, this chapter is about all of us. Amidst all of the changes illustrated in the previous chapters, how have we fared? Massachusetts has made improvements in people's lives in many significant ways: people are living longer with AIDS, the teen birth rate is down and the stubborn discrepancy between African-American and white infant mortality is starting to narrow.

Other things are inexorable such as aging and its accompanying increase in chronic disease. Antibiotics that helped ensure that we no longer die quickly from infectious disease don't insulate us from the accumulated disabilities of chronic disease. And while women, especially in Massachusetts, are challenging the traditional age boundaries of motherhood, even that often comes with the compromised health of multiple fetuses.

Health care is a big business in Massachusetts as it is elsewhere, even though it is generally nonprofit here. In many ways, we have started to apply our consumer skills to obtaining health care, but not to paying for it. We want information—medical, outcomes and satisfaction (but not cost) even if the data show that we haven't changed our behavior much yet because of such information. This is an area we expect to change greatly in the next decade.

Public Health

Aging and Chronic Disease

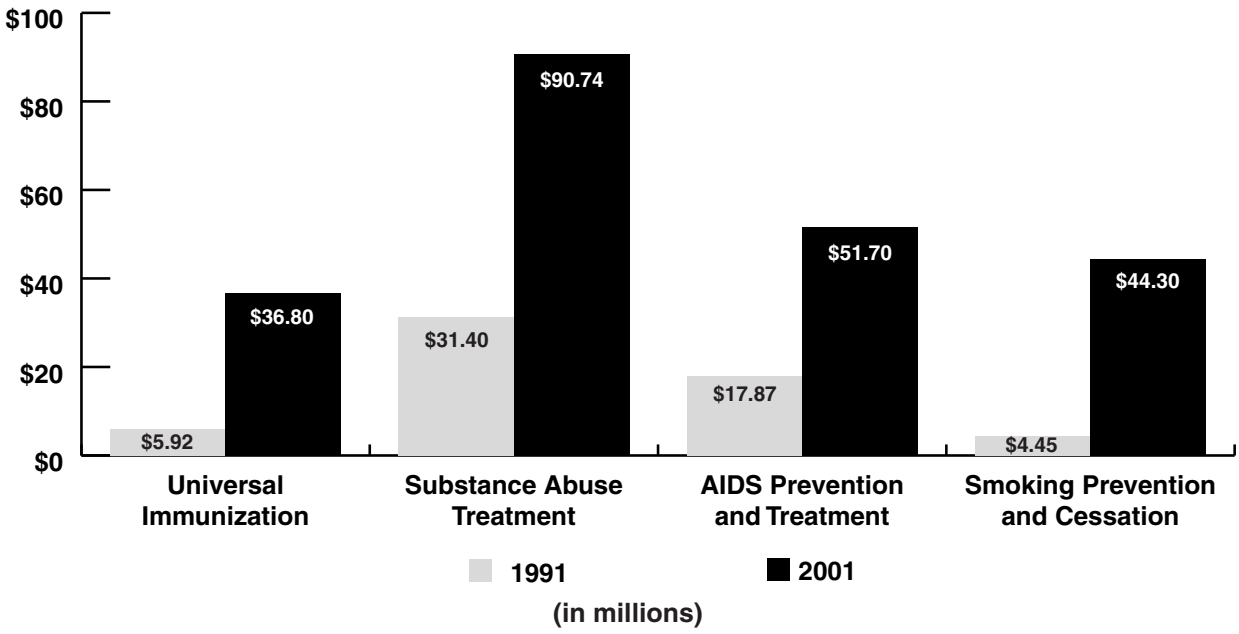
(continued on page 64)

Health by Gender

AIDS

Consumerism

Public Health Expenditures, in Millions, on Four Major Programs in Massachusetts (1991 and 2001)

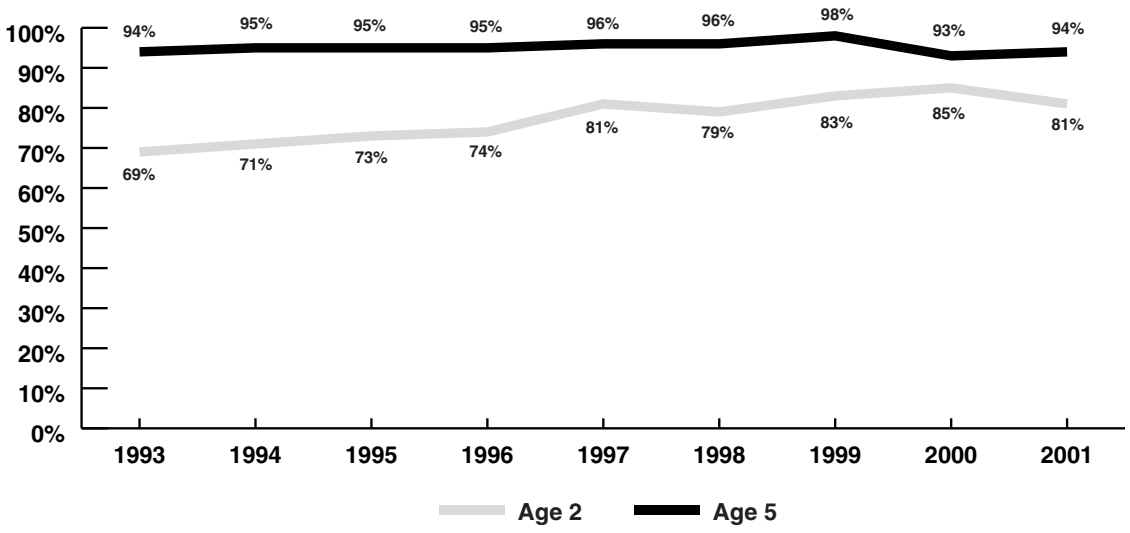


Source: Massachusetts Department of Public Health.
Note: These numbers have not been adjusted for inflation.

Figure 4.1

- Between 1991 and 2001, the Commonwealth increased spending for each of four major health programs: immunization, substance abuse, AIDS and smoking. However, expenditures for smoking prevention and cessation are substantially lower than their 1998 level of $53.41 million.

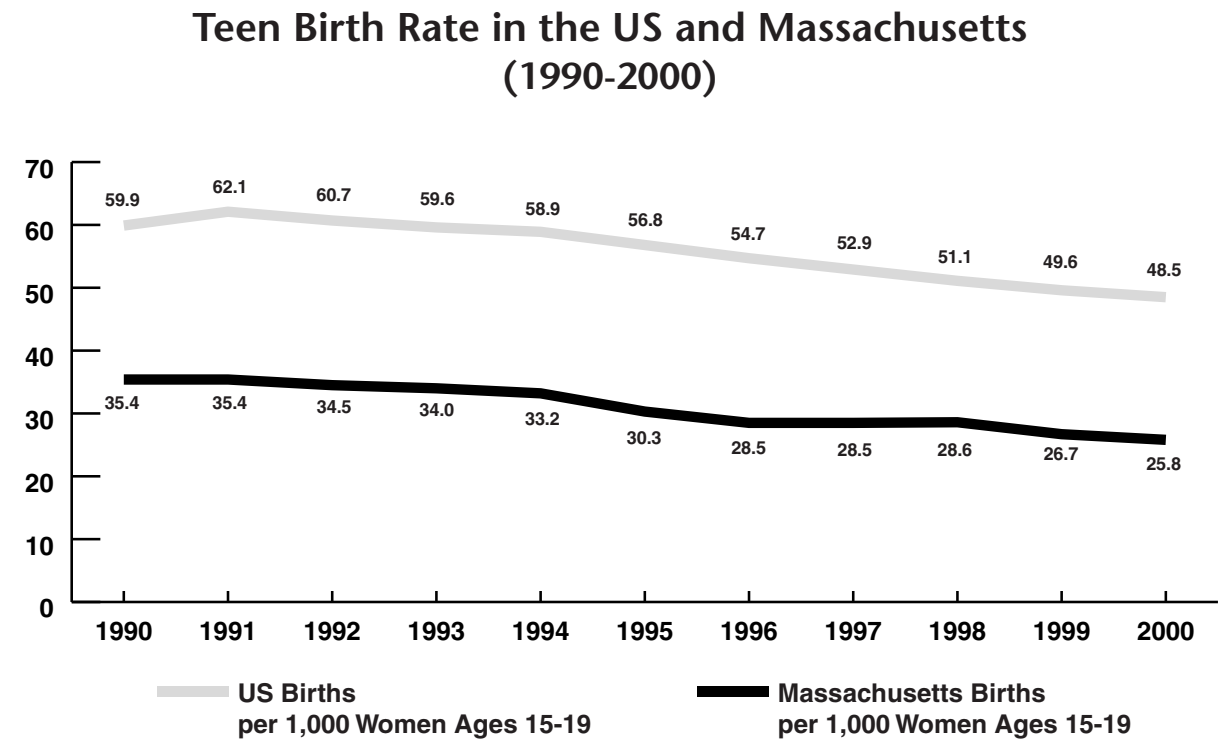
Childhood Immunization Rates in Massachusetts (1993-2001)



Source: MassCHIP database, Massachusetts Department of Public Health, Communicable Disease Programs—Immunization Program
Note: Complete data were unavailable for 1990-1992.

Figure 4.2

- Between 1993 and 2001, childhood immunization rates improved, particularly for two-year-old children.

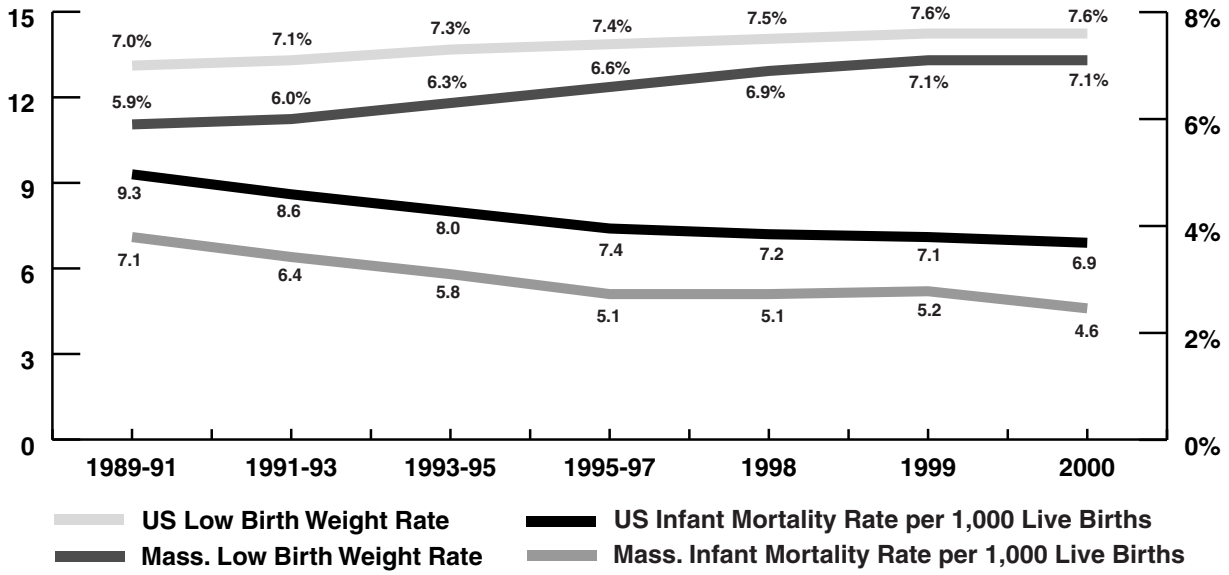


Source: *Adolescent Births: A Statistical Profile Massachusetts, 2002,* Massachusetts Department of Public Health

Figure 4.3

- For every 1,000 female residents in Massachusetts ages 15-19, there were nearly 26 live births in 1998, a 27% decrease from the 1990 rate of 35.4 live births. These rates were substantially lower than national rates—the US birth rate dropped from 59.9 births per 1000 to 48.5 births.

Infant Mortality Rate and Low Birth Weight Rate in the US and Massachusetts (1989-2000)



Sources: *Health, United States, 2001,* US Department of Health and Human Services; *Advance Births 2000*, Massachusetts Department of Public Health

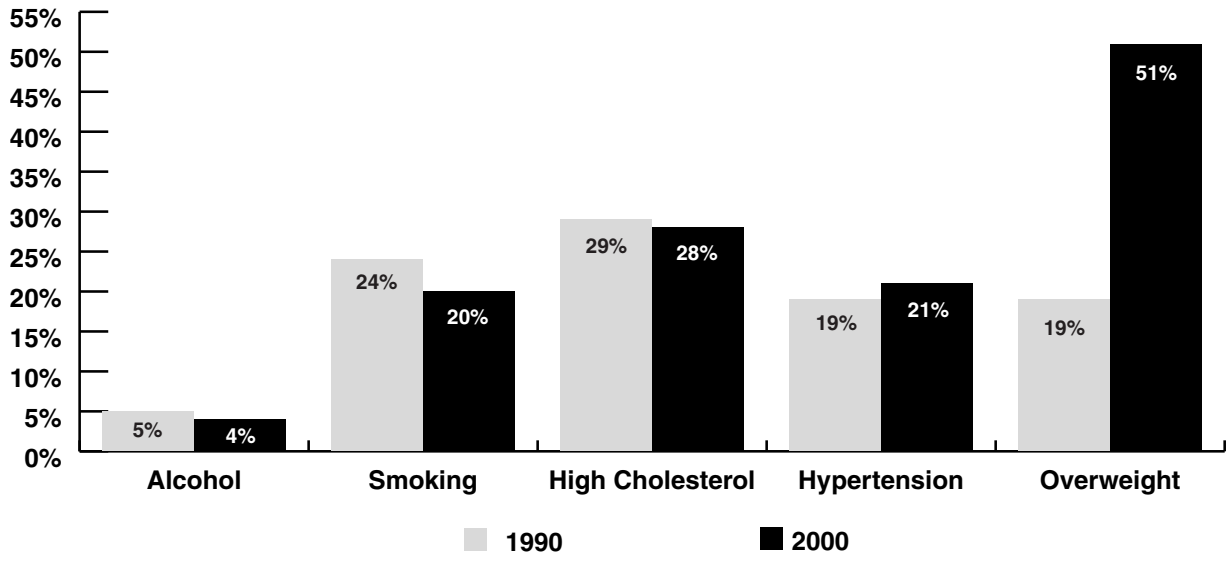
Figure 4.4

- Throughout the 1990s, the Massachusetts infant mortality rate (IMR) was below that of the United States. The decade also saw a substantial lowering of the Massachusetts IMR.

- In 2000, 7.1% of infants born to Massachusetts women were low birth weight (less than 2,500 grams or 5.5 pounds), slightly below the national figure of 7.6%. The low birth weight rate increased over the decade for both Massachusetts and the nation. Recent medical advances are at least partially responsible for the increased survival of low birth weight babies. Additionally, the proliferation of multiple births to older mothers in Massachusetts has added to the increase in low birth weight babies (see Figure 4.11 on page 75).

- The proportion of low birth weight babies varies by race and ethnicity of mother, as does the infant mortality rate.

Prevalence of Health Risk Factors in the Massachusetts Populations (1990 and 2000)



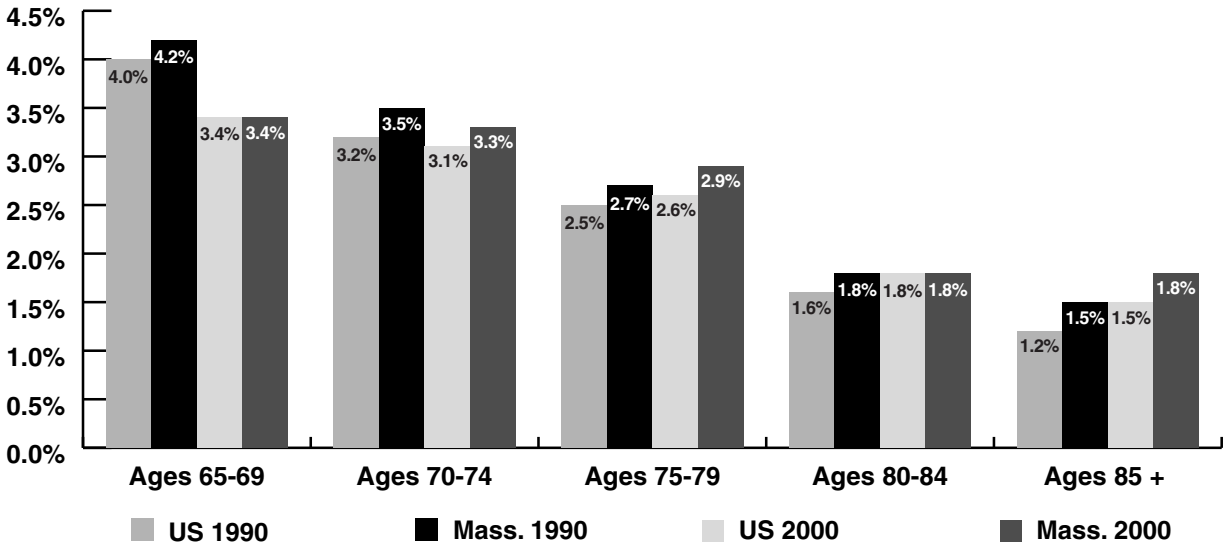
Source: MassCHIP database, Massachusetts Department of Public Health

Figure 4.5

- The proportion of Massachusetts residents for whom smoking, alcohol, or high cholesterol is a risk factor decreased between 1990 and 2000, while the proportion of those with hypertension and obesity as a risk factor rose during this time period.

- Massachusetts residents were far more likely to be overweight by the end of the decade than at the beginning, as is true for the rest of the nation. This has serious ramifications for the incidence of many common chronic diseases and health care expenses.

Percent of Elderly by Age Group in the Total Population in the US and Massachusetts (1990 and 2000)

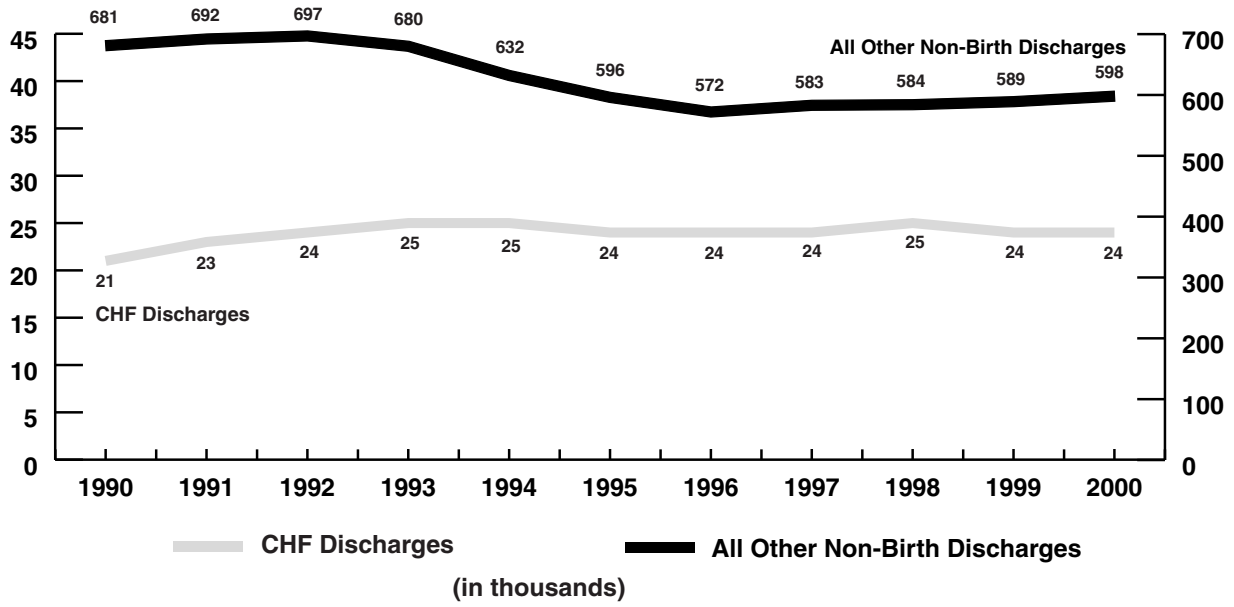


Sources: "Population Estimates for the US, Regions, Divisions, and States by 5-Year Age Groups and Sex: Time Series Estimates, July 1, 1990 to July 1, 1999 and April 1, 1990," US Bureau of Census; "Population Estimates for 2000," Table: PCT, Summary File 2, Sex by Age, US Bureau of Census

Figure 4.6

- The older population of the United States and Massachusetts is growing.
- Massachusetts has more residents in each age category over age 75 than the US as a whole. Massachusetts is an older-than-average state; it's 85-and-older population has grown, especially over the last ten years.
- See Figure 1.8 on page 13 for population in all age categories.

Hospital Discharges for Congestive Heart Failure (CHF) versus All Other Non-Birth Discharges in Massachusetts (1990-2000)

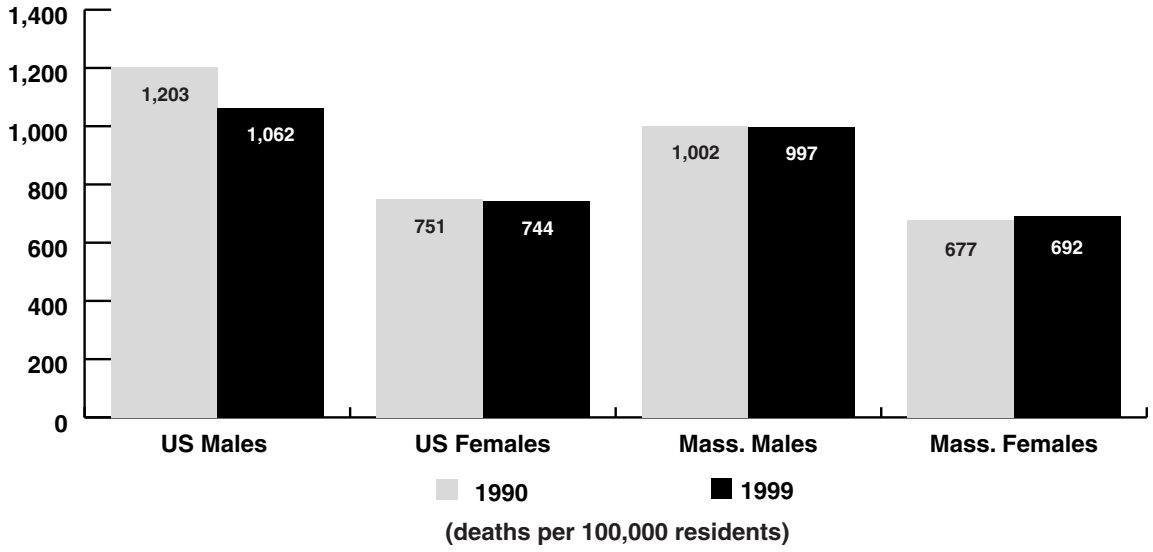


Source: Hospital discharge data, Massachusetts Division of Health Care Finance and Policy

Figure 4.7

- Over the decade, while discharges for all other non-birth causes dropped below the 1990 rate (see Figure 3.14 on page 49), Massachusetts residents did not experience a similar drop in discharges for congestive heart failure (CHF), used here as a proxy for chronic diseases in general. CHF affects the elderly far more often than younger people, as do most chronic diseases.

Age-Adjusted Death Rates by Gender in the US and Massachusetts (1990 and 1999)

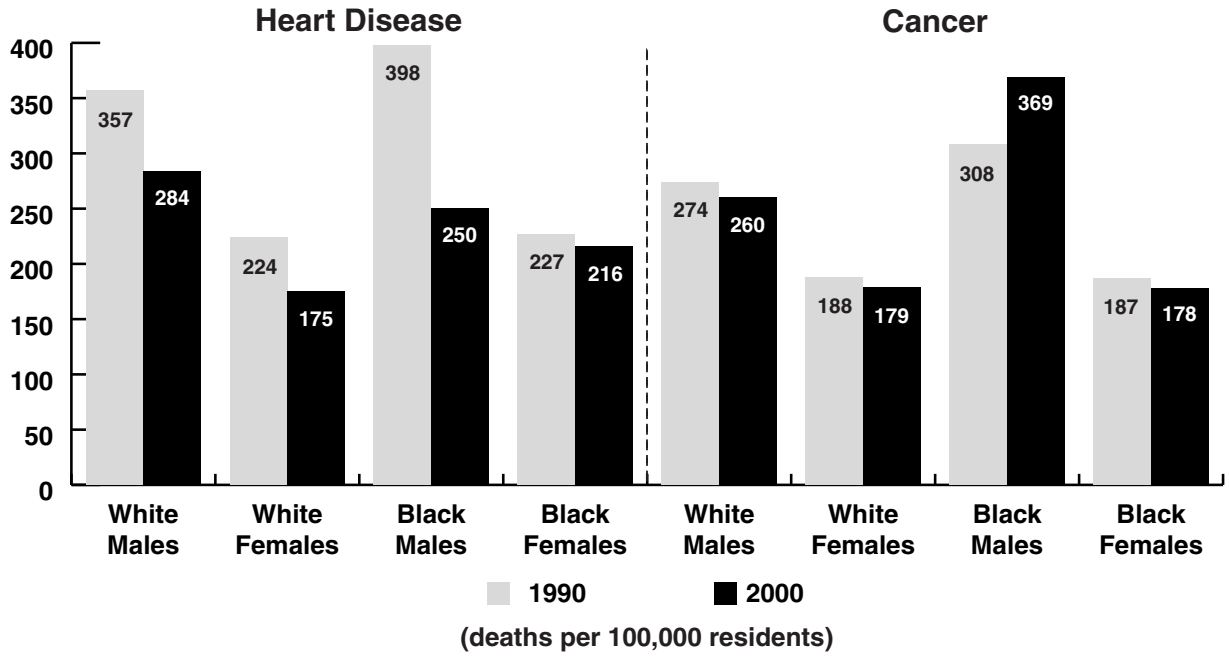


Sources: *Health, United States, 2002,* US Department of Health and Human Services; *Advance Data Deaths 2002,* Massachusetts Department of Public Health

Figure 4.8

- Death rates have dropped across the populations, except for Massachusetts females. Women still have a far lower age-adjusted death rate than males.

Age-Adjusted Heart Disease and Cancer Death Rates by Race and Gender in Massachusetts (1990 and 2000)



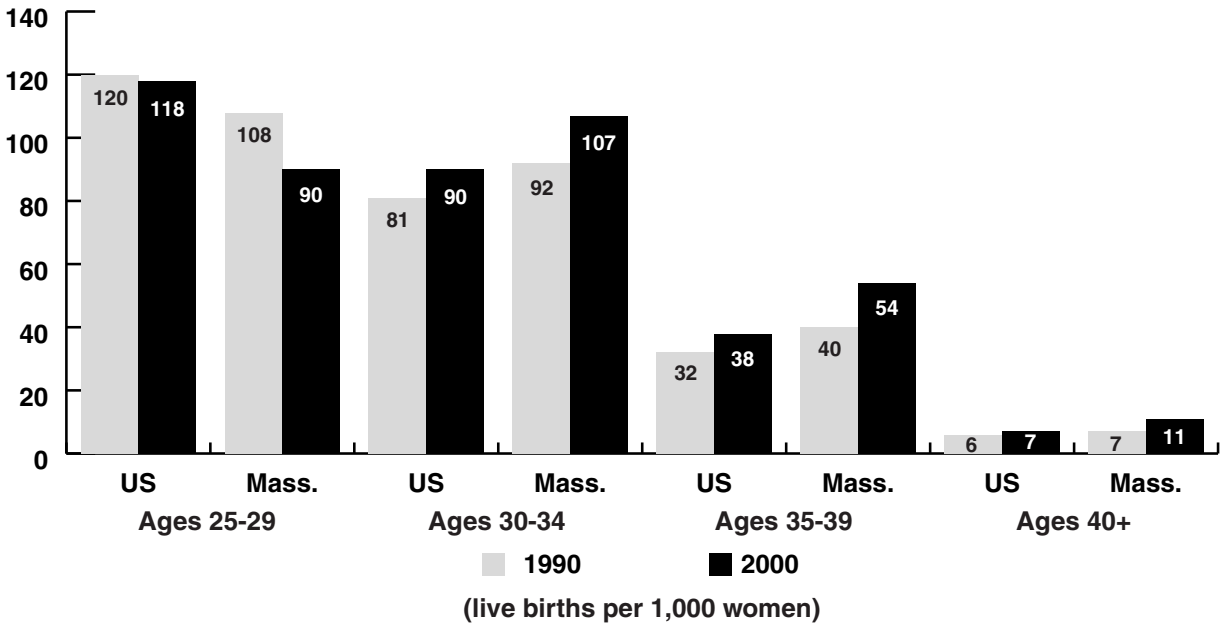
Source: *Advance Data Deaths 2002*, Massachusetts Department of Public Health

Figure 4.9

- Heart disease and cancer continued to be the first and second leading causes of death among Massachusetts residents in 2000, but have declined since 1990, except for cancer deaths in black males.

- Since 1990, age-adjusted heart disease rates have declined markedly among whites and black men in Massachusetts.

Birth Rate by Age of Mother in the US and Massachusetts (1990 and 2000)



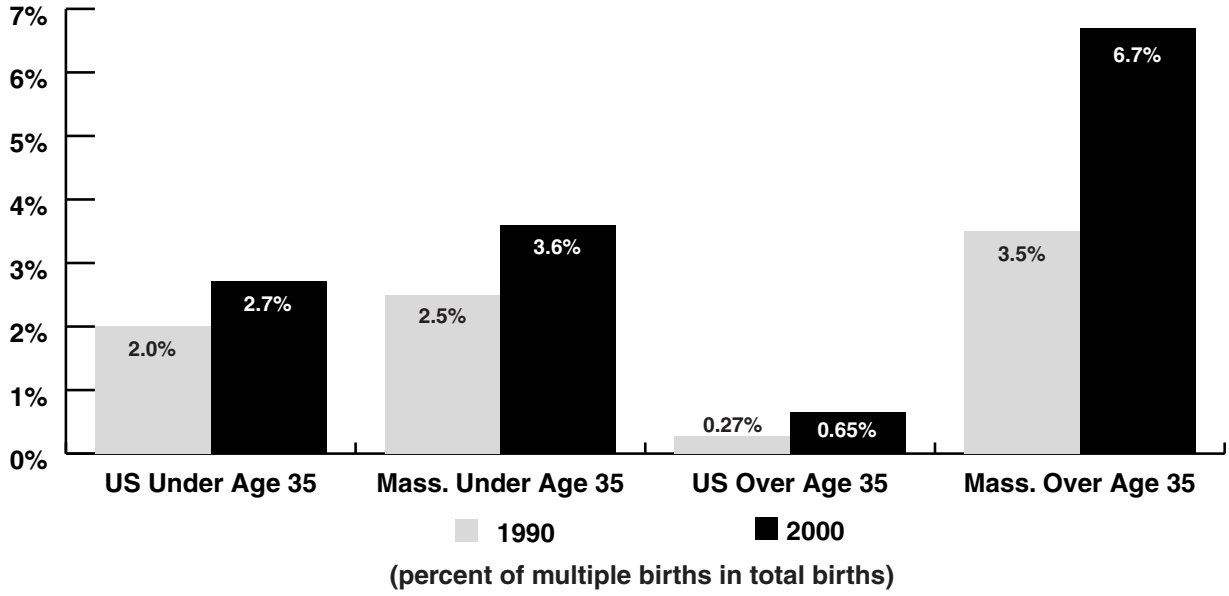
Sources: *Health, United States, 2001,* US Department of Health and Human Services; *Advance Data Deaths 2002,* Massachusetts Department of Public Health

Figure 4.10

- The age group with the largest increase in birth rate from 1990 to 2000 were women over age 40 in Massachusetts (57% increase). In 1995, the birth rate for Massachusetts resident women ages 30-44 surpassed the rate for women younger than age 30 for the first time in Massachusetts history (not shown).

- In the younger age category, ages 25-29, Massachusetts had a lower birth rate in 2000 than the country as a whole, as it did in 1990, but it dropped more severely in Massachusetts (16%) than it did in the US (2%) over the decade.

Percent of Multiple Births by Age of Mother in the US and Massachusetts (1990 and 2000)



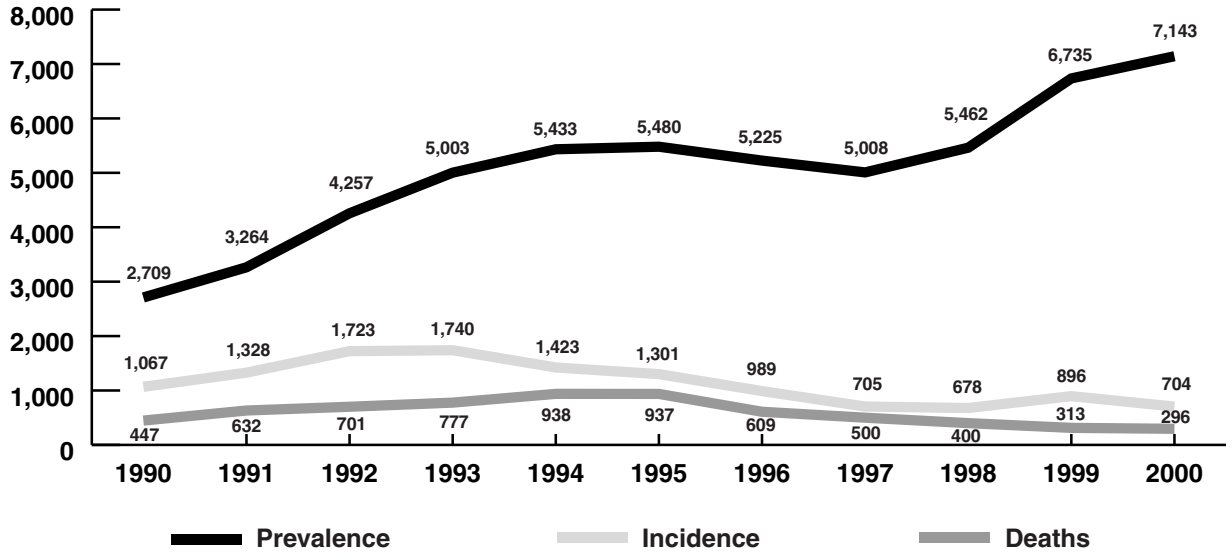
Sources: *National Vital Statistics Report*, US Center for Disease Control and Prevention, February 12, 2002; *Advance Data Births 2000,* Massachusetts Department of Public Health

Figure 4.11

- For Massachusetts women under age 35, the percentage of multiple births increased from 2.5% in 1990 to 3.6% in 2000, an increase of 44%. Among women ages 35 and over, the percentage of multiple births nearly doubled during this time period and was far higher than in the US as a whole.

- This proliferation in multiple births has adversely affected Massachusetts' low birth weight rate which is increasing (see Figure 4.4 on page 68). The increase in multiple births can be attributed to an increase in the age of mothers giving birth and the use of fertility-enhancing therapies. Massachusetts mandates that in-vitro fertilization be a covered benefit in health plans sold in this state (see Figure 2.4 on page 24).

AIDS Incidence, Prevalence and Deaths in Massachusetts (1990-2000)



Sources: *Advance Data Deaths 2002,* Massachusetts Department of Public Health; *HIV/AIDS Surveillance Program*, Massachusetts Department of Public Health, data as of July 1, 2002, Table 5.7.

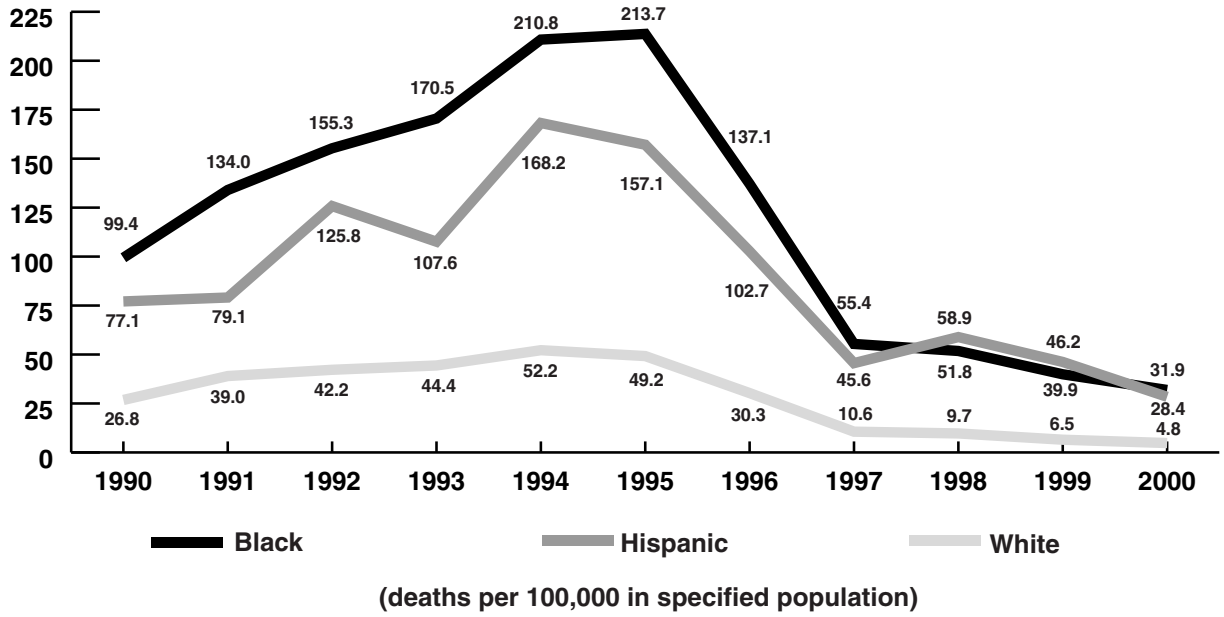
Figure 4.12

- The prevalence of AIDS in Massachusetts increased dramatically between 1990 and 2000, while the incidence rate of new cases declined by about 34%.

- The expansion of the AIDS case definition in 1993, to include persons earlier in the course of their illness, created a large increase in the number of reported cases. The number of AIDS cases in 1993 and later includes persons who were not previously counted under the old definition.

- The number of individuals who died from AIDS in Massachusetts was dramatically lower in 2000 compared to 1990. However, in the intervening years, the number of deaths peaked at 938 in 1994. The decrease in deaths since this peak is due to several factors, including the introduction of new anti-retroviral therapies, and improved public health and medical interventions.

AIDS and HIV-Related Death Rates for Males Ages 25-44 by Race and Ethnicity in Massachusetts (1990-2000)

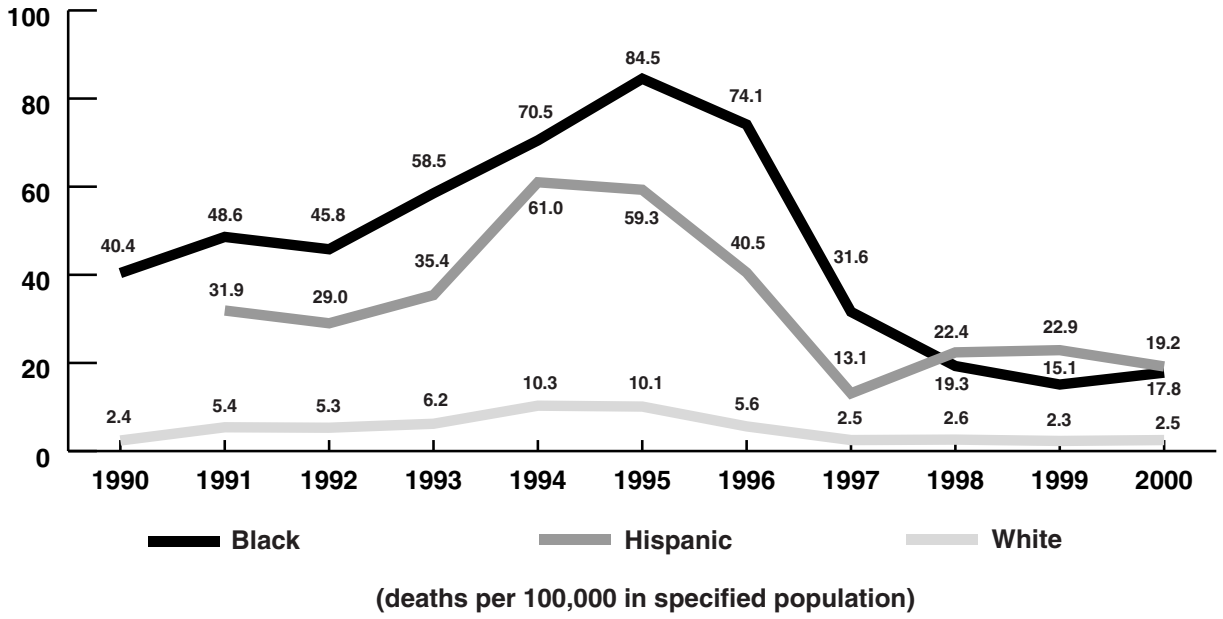


Source: *Advance Data Deaths 2002*, Massachusetts Department of Public Health

Figure 4.13

- AIDS death rates have seen a much more dramatic fluctuation over the decade for individuals of color than for whites. In fact, the decrease in number of deaths due to AIDS, illustrated in Figure 4.12 on page 76, is largely attributable to the dramatic decline in deaths among blacks and Hispanics.

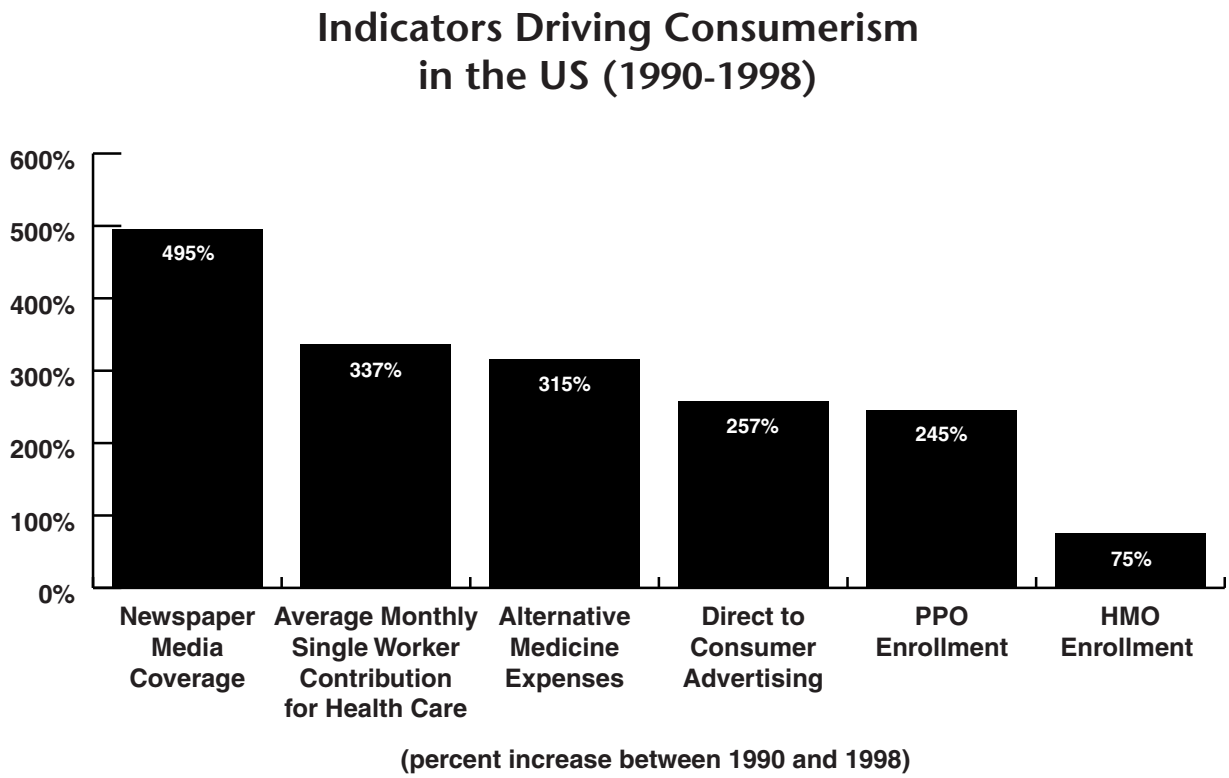
AIDS and HIV-Related Death Rates for Females Ages 25-44 by Race and Ethnicity in Massachusetts (1990-2000)



Source: *Advance Data Deaths 2002*, Massachusetts Department of Public Health

Figure 4.14

- As with men, black and Hispanic women are far more likely to die of AIDS than white women.
- The trend was fairly stable for white women, while the death rate declined substantially for minority women.

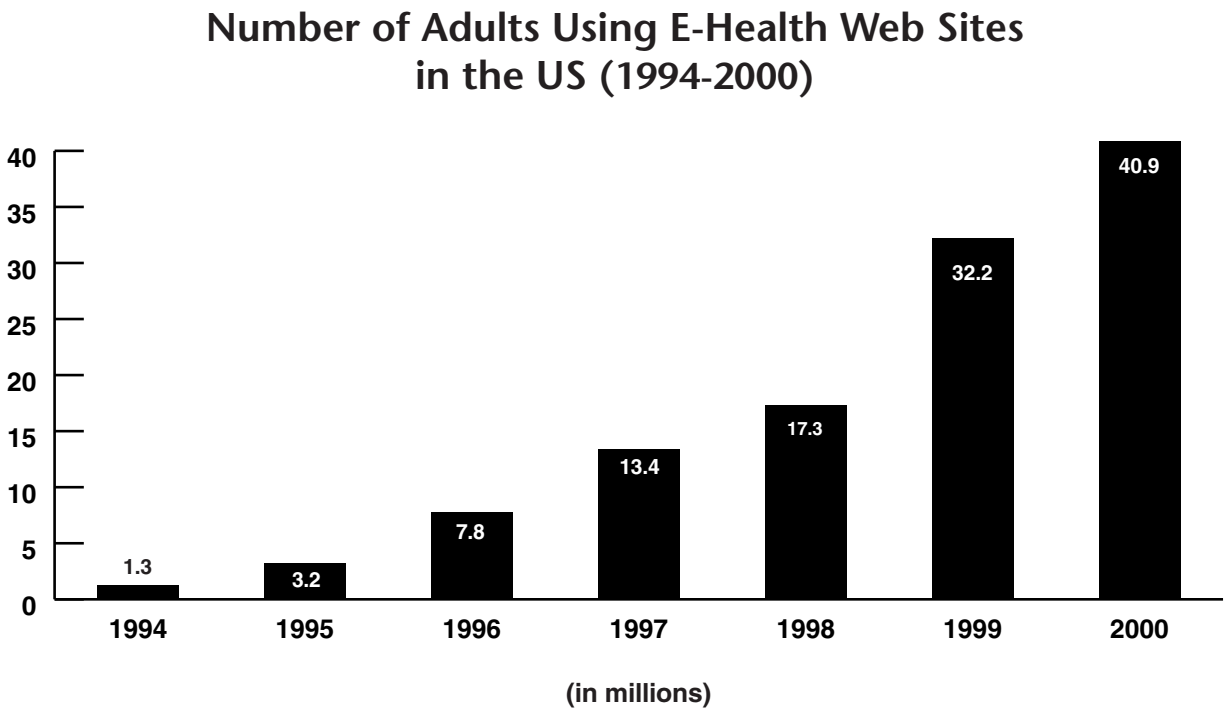


Sources: *Survey of Employer-Sponsored Health Benefits*, 1993, 1996-1998, Kaiser Foundation; *HIAA Survey*, 1998; *The Re-Design of Delivery Complimentary and Integrative Medicine*, Roger Jahnke 1999, Boston Globe Archives

Figure 4.15

- Several indicators suggest that consumers are more involved in their health care in 1998 than they were in 1990. There is more media coverage about health care issues, and more direct-to-consumer advertising about health care which the Food and Drug Administration (FDA) began allowing in 1997. In addition, consumers bear more financial responsibility for their health care coverage, but most still opt for wide choice and few restrictions when shopping for plans, as shown by the 245% rise in PPO enrollment nationally, much higher than the 75% enrollment growth in HMOs. PPOs allow the patients more choice of how to receive services and at what point services are needed.

- Consumers are using their new involvement to make more choices about their health care. A growing proportion of consumers are using alternative therapies, generally not covered by their insurance. So even while people decry the increase in their health insurance premiums, they are choosing to pay out of pocket for therapies which may not be covered by their insurance.



Sources: Cyberdialogue 2000, www.cyberdialog.com; "Health Information Online," *Healthpoint*, April 2000, Division of Health Care Finance and Policy
Note: Complete data were unavailable for 1990-1994.

Figure 4.16

- In 2000, 40.9 million adults used the internet to seek health care information, a huge increase from 1994. These searches, including all aspects of health delivery, disease management, and drug information, are expected to more than double in the next few years.